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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/696,008

10/29/2003

Mark-Matthias Bakran

BAKRAN

7101

20151

7590

05/14/2004

HENRY M FEIEREISEN, LLC

350 FIFTH AVENUE

SUITE 4714

NEW YORK, NY 10118

EXAMINER

STERRETT, JEFFREY L

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/696,008

Applicant(s)

BAKRAN ET AL.

Examiner

Jeffrey L. Sterrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Teichmann (US 6,205,040).

Teichmann discloses a N-point converter circuit (figures 4 and 5) comprising two series connected converter valves (S1/S2 and S3/S4) having turn-off semiconductor switches (T1/T2 and T3/T4, respectively) connected in series at valve connection points (7, 9, and 10), a voltage intermediate circuit having capacitors (Cdc1, Cdc2, Cdc3, and Cdc4) connected in series at capacitor connection points (0, 1, and 3), and cross arms (Saux1, Saux2, and Saux3) having anti-serial connected turn-off semiconductor switches wherein the free ends of the converter valves and capacitors form DC terminals (+ or 2 and – or 4) and a cross arm is connected between a valve connection point (10) that serves as a load terminal and a capacitor connection point (0).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teichmann in view of Mizukoshi (US 6,005,787).

Teichmann teaches a N-point converter circuit as recited by claim 2 except for arranging the turn-off semiconductor switches of the converter valves and the cross arms side-by-side. Mizukoshi teaches as old and known in the art at the time of the invention utilizing arranging the turn-off semiconductor switches (11a, 12a, 13a, 14a, 15a, 16a, 17a, and 18a) of the converter valves and the cross arms of a N-point converter circuit side-by-side as shown in figures 1 and 6. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the N-point converter circuit of Teichmann by arranging the turn-off semiconductor switches of the converter valves and the cross arms side-by-side as taught by Mizukoshi in order to simply the layout of the assembly of the turn-off semiconductor switches.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Teichmann in view of Yuan et al (reference cited on IDS).

Teichmann teaches a N-point converter circuit as recited by claim 5 except for utilizing IGBT's as the turn-off semiconductor switches. Yuan et al teaches as old and known in the art at the time of the invention a N-point converter circuit utilizing IGBT's as the turn-off semiconductor switches. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the N-point converter circuit of Teichmann by utilizing IGBT's as the turn-off semiconductor switches in order to benefit from the known advantages and characteristics of IGBT's as taught by Yuan et al.

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7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rouaud et al (US 5,684,688) is cited to show a N-point converter circuit utilizing IGBT's as the turn-off semiconductor switches old and known in the art at the time of the invention.

Bruckmann et al (US 5,949,669) and Teichmann (US 6,278,626) are cited to show N-point converter circuits utilizing cross arms old and known in the art at the time of the invention.

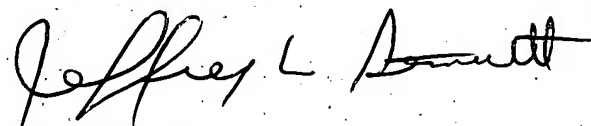
Bijlenga (US 6,480,403) is cited as an equivalent of WO 9940676.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571) 272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey L. Sterrett
Primary Examiner
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